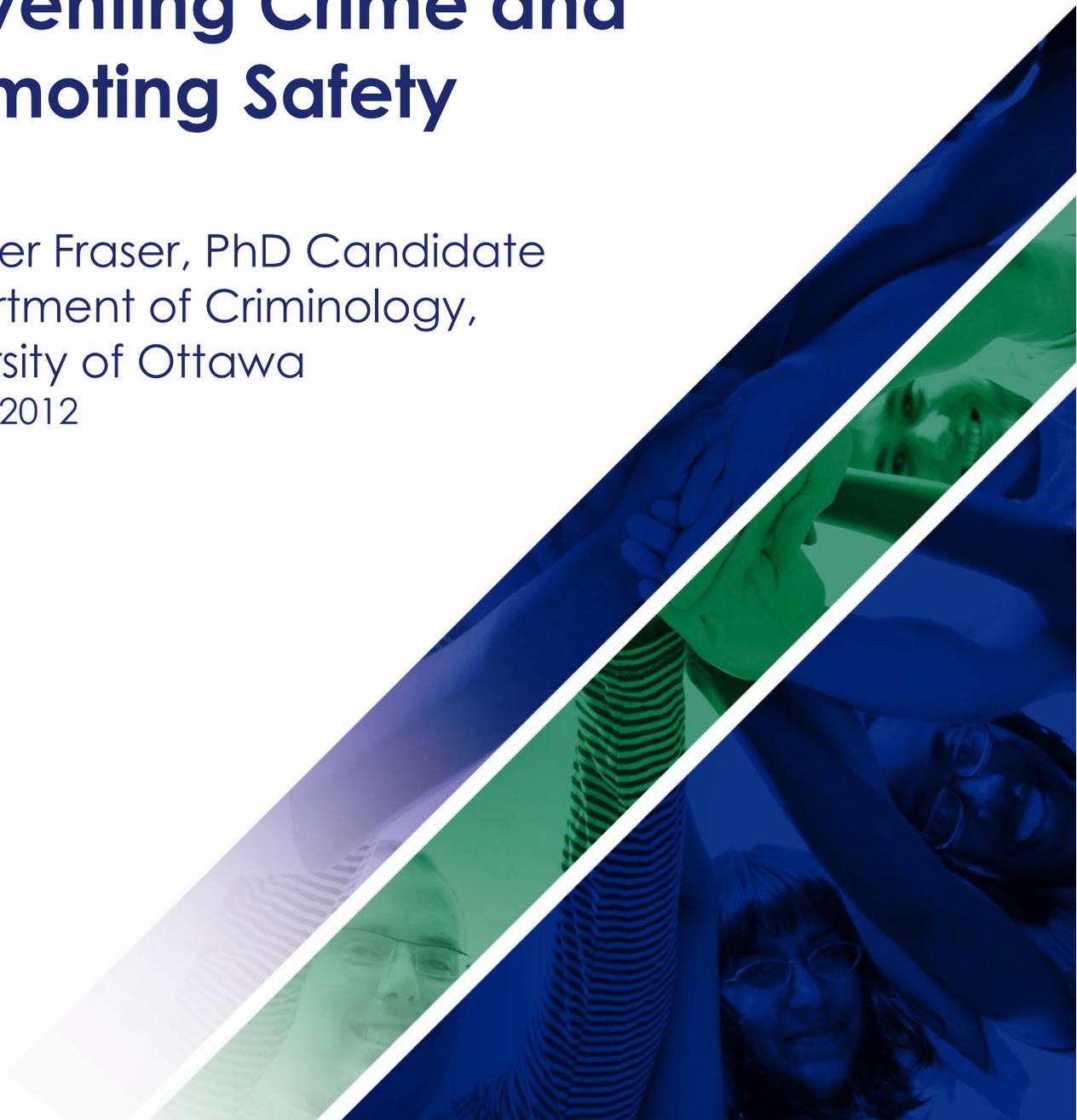




# Rural Transportation Initiatives: Preventing Crime and Promoting Safety

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## **Executive Summary**

Crime Prevention Ottawa (CPO), at the request of the Rural Youth Transportation Working Group, commissioned an exploration into innovative rural transportation options available across North America. Covering research and examples from across Canada and the United States, this report looks at the context of rural life in the Ottawa area, an index of what currently exists for rural residents in terms of transportation options in rural Ottawa, reasons for why rural transportation matters, examples of innovative initiatives, and some ideas about where Ottawa can go from here.

Since amalgamation in 2001, the City of Ottawa has expanded and is now made up of 90% rural land area. The population of residents in rural Ottawa is expected to grow significantly over the next few decades. With increasing numbers of individuals and families living in rural areas, transportation becomes a pressing issue. Access to affordable transportation affects how residents commute to work, their level of civic engagement and sense of community, their access to necessary medical and social services, as well as opportunities for recreation.

In Ottawa there are currently a number of transportation options for residents of rural areas: rural routes operated by OC Transpo, transportation coordinated by community services, and personal vehicles. However, a number of barriers still exist including cost and accessibility of transportation. These transportation barriers can be particularly acute for youth, women, older people, persons with disabilities, victims of violence, and others living on low income.

Across North America there are many examples of innovative initiatives to increase the accessibility of transportation for residents of rural areas. Some of these include affordable car ownership programs, rural public transportation systems, federal funding arrangements to support municipal and provincial transportation infrastructure, and active transportation initiatives that promote cycling and walking in rural areas.

Several tools exist to help rural communities assess the passenger need and demand for rural transportation, conduct cost-benefit analyses, and use technology to ensure efficiency of transportation systems. Other jurisdictions have also conducted comprehensive studies of the specific transportation needs of the residents living in their region.

This report makes the case that access to transportation for residents of rural Ottawa is integral to the liveability of communities. Access to transportation is particularly important for rural youth who may otherwise be unable to find jobs, do volunteer work, or participate in meaningful recreational activities. These factors can have a significant impact on the future wellbeing of rural youth and the extent to which they engage in criminal or other antisocial behaviours. Providing access to rural transportation is thus an important component of an overall strategy to prevent crime and promote safety in Ottawa's communities.

## Introduction

In 2011, Crime Prevention Ottawa commissioned the production of a literature review on rural crime prevention strategies. The report identifies several unique risk factors for youth living in rural areas, compared with urban areas. Amongst these risk factors are fewer recreational and employment options for youth and a lack of public transportation that makes accessing social, recreational, and employment opportunities in urban or suburban centres difficult.

As a group of concerned service providers, not-for-profit organizations, and representatives from the City of Ottawa, the Rural Youth Transportation Working Group approached Crime Prevention Ottawa to look more in-depth into the issue of transportation for youth living in rural areas. Not only does a lack of transportation make it difficult for youth to access services in urban centers, but transportation exists as a systemic barrier for many service providers in terms of their ability to provide services and ensure program participation amongst youth living in Ottawa's rural communities.

While other vulnerable populations suffer from a lack of coordinated transportation services (e.g., people living on low income, persons with disabilities, seniors, victims of violence), the Rural Youth Transportation Working Group has a specific lens towards the issue of employability amongst youth in several of Ottawa's rural communities. Particularly, they are of the view that youth are "falling through the cracks" when it comes to accessing employment opportunities across the National Capital Region.

The aim of this report is to inform community service providers about innovative transportation options that currently exist across North America. With this information, service providers can then advocate for a municipal strategy that would help eliminate barriers not only for youth, but for other vulnerable populations living in rural communities who have difficulty accessing transportation. Included in this report is a consideration of the context in the Ottawa region, a discussion of why focusing on rural transportation is a strategic approach, an examination of innovative rural transportation initiatives that have been implemented in Canada and the United States, and a discussion of where to go from here. The conclusion will bring together the various elements of this report with a lens toward preventing crime and promoting safety among Ottawa's rural youth.

## The Context in Ottawa

### **Rural Communities**

In 2001, the former Region of Ottawa-Carleton and surrounding municipalities amalgamated to form the City of Ottawa. In this process, Ottawa's rural area expanded to 2,230 km<sup>2</sup> or 90% of the total land area of the region, with farmland comprising 40% of the rural area. Today, the City of Ottawa is comprised of the rural townships of West Carleton, Rideau, Osgoode, and Goulbourn, as well as rural portions of the former cities of Kanata, Nepean, Cumberland, and Gloucester (City of Ottawa, 2005). Within these townships are a number of rural villages and hamlets extending to Galetta in the west, Pierces Corners in the south, and Vars-Sarsfield in the east. Each community is unique in community resources, level of resident engagement, distance from downtown Ottawa, and socio-economic demographics.

Statistics Canada's 2011 census counted a total population of 883,391 for the City of Ottawa (Statistics Canada, 2012). The last *Ottawa Counts* study of rural populations conducted by the City of Ottawa in 2005 marked the population of rural Ottawa at 84,500, an 8.5% increase over the 2001 population. Of the total rural population, 53% of people live in country lot subdivisions, 42% live in one of Ottawa's 26 rural villages, and 5% live on farms (City of Ottawa, 2005). The rural population in Ottawa is expected to increase to 116,600 by the year 2031 (City of Ottawa, 2008).

Rural communities are made up primarily of people in the 30-49 age group (34.3% of the total rural population), with children and teenagers comprising the second largest age group (28.7%). The proportion of children and teenagers in the Ottawa region is only higher in suburban neighbourhoods. Rural neighbourhoods in Ottawa have the lowest proportion of inhabitants in their 20s (9.1%) compared with all other Ottawa neighbourhoods (City of Ottawa, 2005). This suggests that while many young people may grow up in rural areas, many have migrated to more urban areas by the time they reach early adulthood.

The Ottawa Neighbourhood Study (ONS), a project bringing together researchers from the University of Ottawa and representatives from various community agencies, has conducted in-depth profiles of 89 Ottawa neighbourhoods. This project is being used to examine how characteristics of neighbourhoods can impact the physical, mental, and social health of its residents. The research team has explored a number of indicators of wellness that are directly related to issues of transportation:

- How residents commute to work;
- Level of civic engagement and sense of community responsibility;
- Access to grocery stores, pharmacies, libraries, and schools; and,
- Amount of greenspace and opportunities for recreation (ONS, 2009).

Please see the Ottawa Neighbourhood Study website for detailed demographic information about specific communities in the Ottawa region:

<http://www.neighbourhoodstudy.ca>.

### ***Transportation in Ottawa***

There are a variety of transportation options currently available in the Ottawa area: walking and cycling paths, road networks, as well as public buses and an O-Train rapid transit line provided by OC Transpo. OC Transpo began offering service to rural communities in 2002, one year after the amalgamation of the City of Ottawa. OC Transpo partners with several local bus companies and area municipalities to offer 25 “rural partner routes.” These routes are part of the “500” route series with schedules set by the rural partners. These routes either connect passengers to regular OC Transpo routes or transport passengers directly to their destinations (e.g., downtown Ottawa). Despite the availability of rural service, a rural express pass costs more: \$119/month for adults compared to \$96.25/month for a regular OC Transpo adult bus pass (OC Transpo, 2012). In 2010, rural passes make up 0.1% of OC Transpo’s ridership and 0.2% of passenger fare revenue (OC Transpo, 2011).

Rural areas are often known for their “car culture” (Shikaze, n.d.). Most households in rural Ottawa have at least one vehicle, with the majority of households (53-57%) having two vehicles available for use. Only 1% of households in rural areas do not have access to a vehicle. Car travel from rural areas is concentrated during peak hours in the morning and afternoon. In the morning peak hours, 67% of travel originating in rural areas is to an urban destination, compared with only 2% of trips being urban-to-rural. Less than 1% of short duration trips in rural areas involve public transit and from 1% to 12%, depending on the community, for longer duration trips (City of Ottawa, 2008).

Community services in Ottawa also coordinate transportation for specific populations of rural residents. Rural Ottawa South Support Services (ROSSS), Western Ottawa Community Resource Centre (WOCRC), and Eastern Ottawa Resource Centre (EORC) all coordinate transportation for seniors and adults with physical disabilities to promote their ability to live in their home and chosen community. Volunteers and paid drivers transport residents for medical, personal, social, or shopping needs based on a two days’ notice reservation. Clients are asked to pay a fee based on kilometres driven.

For example,

- 1-10 km \$10.00
- 11-30 km \$15.00
- 31-50 km \$20.00
- 51-80 km \$30.00
- 81-100 km \$40.00
- Over 100 km \$0.45/km

Financial assistance is available to those who require it. Please see the websites for each community resource centre for more specific information:

- ROSSS: <http://rosss.ca/>
- WOCRC: <http://www.wocrc.ca/en/home.aspx>
- EORC: <http://www.eorc-gloucester.ca/>

In 2008, the City of Ottawa released a *Transportation Master Plan* to outline the projected transportation needs for the city up to the year 2031, when Ottawa's population is expected to approach 1.14 million. The plan includes a strategic vision to implement transportation infrastructure that supports the city's social, environmental, and economic sustainability by managing the existing transportation systems, creating innovative approaches to land use, enhancing the safety and security of transportation options, and protecting the environment. By 2031, the City of Ottawa (2008, p. 22) expects "rural residents will continue to rely on cars, but will have other choices" including multi-use pathways and smaller "Park & Ride" parking lots at rural transit stops.

## **Why Focus on Rural Transportation?**

Transportation is the key link that connects people to employment, recreational, and social opportunities. Canadians living in rural areas face higher transportation costs and fewer public transportation options than those living in urban centres (Community Action Program for Children of Waterloo Region, 2005). Even households that have a vehicle face high costs to operate it because of the distance travelled, and youth may not have access to the vehicle as it is often the only car their parents have to take to work (Community Action Program for Children of Waterloo Region, 2005). Active transportation (i.e., walking or cycling) is challenging in rural areas because of the lack of appropriate infrastructure (i.e., focus on roads and highways) and the large distances between destinations (Shikaze, n.d.).

Transportation barriers can have exacerbated effects on specific groups of people. Youth living in rural areas are particularly vulnerable when it comes to the availability of transportation. Youth tend to rely on walking, cycling, or getting rides from others when they need to travel. When youth are able to get a driver's license, many can still not afford the cost of a vehicle or the cost of insurance. Without a source of reliable transportation, youth miss opportunities to get involved in after-school activities, recreation, volunteer work, paid labour, and as an effect miss out on a sense of community inclusion (Herold & Kaye, 2001). The importance of meaningful community engagement for youth cannot be overstated. Youth who are involved in their communities are more likely to have positive life outcomes, particularly among at-risk youth (Ontario Rural Council, 2007).

The Ontario Rural Council (2007) offers a variety of suggestions to address transportation barriers for rural youth:

- Collaborate with drivers who transport seniors and people with disabilities to see if they will extend the service to youth travelling to extracurricular and volunteer activities;
- Expand city transportation, bus routes, and shuttles into rural areas;
- Move recreational activities closer to rural areas;
- Create car co-ops where people pay a fee to rent a car when needed;
- Promote the development and use of carpooling and ride boards; and,
- Lobby governments to address the impacts of graduated licensing on rural youth compared to urban youth.

All individuals living on low income have difficulty accessing transportation. The cost of owning a car, taking taxis, or using inter-community bus services can present as barriers to people who are unemployed or seeking employment, people enrolled in Ontario Works, or people living with a disability or special need. Individuals with limited mobility are often in need of specialized transportation services that may not be available in rural communities. However, rural communities are sometimes the only location where people on limited incomes can find affordable single dwelling housing (Lynn Bowering Consulting, 2012).

Thirty-five percent of rural women in Ontario have poor or intermittent (e.g., one vehicle to be shared amongst several people in a household, have a vehicle but it is in a state of disrepair, or do not have a drivers' license and must rely on others to drive) access to a vehicle and of these women only 15% are employed outside the home. Of women with poor access to a vehicle, 44% have annual incomes less than \$10,000, suggesting a strong link between income, employment, and vehicle access for rural women. Since many women are the

primary caregivers for children, poor access to a vehicle means they have difficulty taking their children to activities or childcare. However, high transportation costs, the costs of maintaining a vehicle, and childcare costs often are not outweighed by the earnings of a low paying job. As a result, many rural women remain unemployed. In interviews with rural women, researchers at the University of Guelph found that the quality of life for women living in rural areas is intimately bound up with their ability to access transportation (Fuller, Turner, & O'Leary, 2008).

Older people may also have difficulty accessing rural transportation services, but the majority choose not to use public transit options even if they are available. Only 6% of people over 65 used public transportation in Canada in 2009, while 90% of seniors with a valid driver's license drove at least once a week. Even of seniors who no longer drive, most rely on informal transportation networks (e.g., spouse, child, friend) to transport them via car to their desired destination (Sleightholm, Billette, Normandin, & Hofmann, 2010). A study in New Brunswick found that the various transportation options for seniors in the province (e.g., provided by non-profit associations, assisted living homes, private companies, and public systems) does not address their mobility barriers because seniors are choosing not to use these services for a variety of reasons (e.g., not wanting to lose their independence, being used to getting places by car). Alternate transportation options that are made available to older Canadians need to be seen as relevant to this population as they age and are no longer able to drive, but continue to need access to medical and social services (Hanson, 2008).

Victims of violence living in rural areas are especially underserved by lack of transportation and access to social services. The relative isolation of some rural communities may mean that partner abuse and child abuse are more easily hidden and victims may find it more difficult to leave. If an abuser does leave the family home, they may take the only vehicle with them, leaving other family members stranded. Many victims of ongoing abuse have little money to spend on transportation to get to support services located in urban centres and if they do, may not have the time it takes to travel into the city without taking time off work or without their abuser noticing. Ontario's Victim/Witness Assistance Program (VWAP) recommends that service providers better communicate about their clients' needs and coordinate their services so that rural residents do not have to make multiple long-distance trips into the city. Service providers who make site visits to rural communities should come equipped to offer clients referrals and information to a broad range of other services they might require. They should also look into office sharing arrangements with agencies that are based in rural communities. Some shelter outreach programs offer transportation assistance to victims of partner violence, but service providers should strategize

to come up with other innovative travel options for their clients (Kasdorff & Erb, 2010).

Focusing on transportation in rural communities is important because transportation impacts the “liveability” of rural communities for residents (Chrisholm Smith, 2012). Liveability refers to the ability of rural residents to access affordable housing; improve their economic circumstances through education, training, and job experience; participate in their communities and benefit from social contact; and, access essential services such as healthcare, social services, and nutrition. All of these factors are connected to and impacted by the range of transportation choices available to residents of rural communities (Chrisholm Smith, 2012; Majkut, 2011; O’Leary, 2008).

## **Innovative Initiatives across North America**

### ***Affordable Car Ownership Programs***

While public transit and other transportation services may be available, these services do not work for everyone and many individuals prefer travelling in a vehicle for a variety of reasons. For example, people may need to run a number of errands in different locations on a particular day, a task that is much easier with a motor vehicle. Studies have found that owning a car leads to increased earnings and reduced reliance on state social programs (Hayden & Mauldin, 2002). And, as suggested above, seniors tend to prefer travelling in a motor vehicle.

To address this specific need, non-profit organizations and government agencies throughout the United States have coordinated to make affordable cars available to low income families and job seekers. In one study of American car ownership programs, it was found that these programs made cars with a retail value from \$2,000 to \$5,000 available at a cost ranging from \$0 to \$5,000 depending on the client’s financial situation. Car ownership arrangements are usually structured through monthly loan or lease payments. By over-viewing seven car ownership programs across the United States, the researchers were able to draft recommendations for best practices, policy implications, and ideas for next steps (see Hayden & Mauldin, 2002).

Affordable car ownership programs seem to be more prevalent in the United States than in Canada. In Canada, a number of communities operate co-operative car share programs that allow members to reserve a car as needed and pay an hourly and/or distance rate on top of a yearly membership fee (e.g., VRTUCAR in Ottawa). Some of these programs offer free memberships to qualified clients. For example, Victoria Car Share in British Columbia partners with the Greater Victoria Housing Society to offer free memberships to residents of public housing. However, most car share programs seem to be located in urban, and not rural, areas. Other types of programs include ride sharing where online services match drivers and passengers (e.g., Ottawacarpool.ca, Carpool.ca, and eRideshare.com).

### JumpStart

Wisconsin, United States

Created in 1998, Jumpstart helps families in rural areas buy late-model new vehicles or quality used cars at affordable prices. Many rural families rely on a vehicle to access childcare and other services or to get to work because of distance and lack of public transportation. The ability to access an affordable vehicle allows families, who would otherwise struggle to own or keep a vehicle in good repair, the chance to participate in the whole of society. Programs like JumpStart rely on car dealers to offer low-interest loans to program clients or on quality donated cars (see Rubiner, 2006).

Website: <http://westcap.org/services/transportation-2/programdetails>

### ***Rural Public Transportation Systems***

Public transportation systems are implemented in many rural communities across North America with the assistance of federal funding administered through state and provincial levels of government. Such systems are small in size compared to urban systems, vary considerably depending on the community, and emphasize access to services, shopping, and employment. While the bulk of rural-to-urban public transportation is for employment purposes, specialized programs exist that transport people with disabilities or those enrolled in social service programs. These services can include demand-responsive service, fixed route service, paratransit service, charter routes, subscription services, and ridesharing programs. In an evaluation of the economic impacts of rural public transportation systems, American researchers found that the most cost-effective systems make a concerted effort to keep their costs low and have employed special strategies to attract passengers (Burkhardt, Hendrick, & McGavock, 1998).

Rural public transportation systems can have a number of potential benefits to community members:

- Improved access to employment;
- Reduction in unemployment;
- Jobs for individuals with disabilities;
- Access to education or training;
- Access to medical services, shopping, and other social services;
- Increase in tourism; and,
- More jobs in the community (Burkhardt, et al., 1998).

No one public transportation system can meet the needs of all individuals living in diverse rural communities. The specific characteristics of a particular rural community need to be considered before implementing any transportation system. The American Transportation Research Board has developed a *Toolkit for Rural Community Coordinated Transportation Services* that municipalities can refer to if they are looking to implement a public transportation system in a rural community (Burkhardt, Nelson, Murray, & Koffman, 2004). This toolkit suggests rural services should partner with other transportation service providers to maximize cost-effectiveness and efficiency. Some of the benefits of coordination include:

- Increased access to funding and more funding sources;
- Access to specialized expertise;
- Lower trip costs for users and agencies; and,
- Increased access to transportation services (Burkhardt, et al., 2004).

A recent synthesis of rural transit innovations found that rural service providers in the United States have been effective at responding to the service needs of dynamic rural communities, including implementing alternative service models (e.g., dial-a-ride programs rather than fixed routes) and communicating with the public through new avenues, such as social media (Hosen & Powell, 2011).

It is important to note the unique challenges rural communities face when trying to create rural transportation systems. Rural services may lack connections with transportation service providers in urban centres, rural services may have limited staffing and financial resources, and proposals for funding may not appear cost-effective because of longer distance trips. In some rural areas, including in Ottawa, there is a strong voice opposed to rural public transportation in an effort to keep the transit levy included in property taxes low (see Chianello, 2012). In addition to coordinating with other services, funding partnerships with different levels of government can help rural communities sustain their services (Chrisholm Smith, 2012).

Bancroft Community Transit  
Bancroft, Ontario

With assistance from the United Way, the Ontario Trillium Foundation, and the County of Hastings Social Services, Bancroft Community Transit operates as a non-profit organization providing door-to-door transportation service. The service is run by volunteer drivers who are dispatched based on reservations made for transportation to legal appointments, special programs, counselling appointments, medical appointments, childcare, work placements, and other necessary errands. Fares are based on distance travelled and riders must be registered with an associated agency to use the service.

Website: <http://www.bancroftcommunitytransit.com>

Deseronto Transit  
Deseronto, Ontario

Deseronto is a small town of less than 2,000 in Ontario and is nearby to Tyendinaga Mohawk Territory. Deseronto Transit uses small buses operating on a limited schedule to transport residents to destinations within Deseronto, but also to Napanee, Belleville, and other communities throughout Prince Edward County. The service is available Monday to Friday with some trips requiring phone-in reservations. There is limited service on Saturdays and no service on Sundays or statutory holidays. Deseronto Transit also runs a monthly shopping trip to major grocery store destinations in Napanee.

Website: <http://deseronto.ca/departments/deseronto-transit>

JAUNT  
Charlottesville, Virginia, United States

Founded in 1975, JAUNT operates in six rural counties outside of Charlottesville, Virginia. This system provides fixed commuter service, as well as demand-responsive services, a wintertime homeless shuttle program, and human service transportation for Medicaid and Head Start clients. A case study of this service found that clients use JAUNT's service for a variety of reasons: to access medical care, to get to work, for social or recreational reasons, for childcare, and shopping. JAUNT provides most of its service to lower income residents and women who otherwise would not have regular access to transportation. It is projected that if JAUNT was not available, 60% of commuters would become unemployed (Burkhardt, et al., 1998). JAUNT has been able to survive and thrive because of innovation: it has optimized rural resources, embraced advances in

technology, and positioned itself as a community entrepreneur (Hosen & Powell, 2011).

Website: <http://www.ridejaunt.org>

### TROUT

North Hastings and Highlands East, Ontario

TROUT, The Rural Overland Utility Transit, provides rural public transportation for all residents and door-to-door service for seniors and people with physical disabilities. The service offers a weekly schedule to various destinations within Bancroft and to communities throughout North Hastings County and the Municipality of Highlands East in Ontario. TROUT is provided through Community Care North Hastings, a community service that is funded in part by Ontario's South East Local Health Integration Network.

Website: <http://catchthetrout.ca>

### **Federal Funding Arrangements**

Federal government funding can significantly increase the ability of rural communities to provide transportation services to their residents. In the United States, funding through the Federal Transit Administration has provided a significant amount of funding since 2005 for programs serving rural areas. This new pocket of funding has allowed for the creation of innovative programs, such as transit programs specifically serving Aboriginal communities, people with disabilities, and in public parks (KFH Group, Inc., 2009).

In Canada, Transport Canada provides funds for public transit largely for infrastructure through the *Federal Public Transit Fund* and the *Federal Gas Tax Fund*. The responsibility for delivering public transportation falls to the provinces, which is then delegated to individual municipalities. Funding arrangements between municipalities and the provinces vary across the country (Transport Canada, 2006). As of 1998 in Ontario, the *Local Services and Realignment Act* granted municipalities the full responsibility of delivering public transportation. The *Municipal Act, 2001* (section 69.2) outlines the legal rights and responsibilities of municipalities in operating "passenger transportation systems". However, municipalities still receive funds from both the provincial and federal governments to finance the service delivery of public transportation (Marr, 2010).

In 2004, Ontario introduced the *Dedicated Gas Tax Funds for Public Transit Program*, which allows municipalities to reclaim gas taxes to invest in existing transportation systems. Since many rural communities in the province do not have transportation systems currently in place, this fund was inaccessible. Revisions in 2006 allowed communities to use gas tax funds for new transportation systems, however most funds are still allocated to urban centres (O'Leary, 2009).

#### SAFETEA-LU United States

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law in the United States in 2005. This act guarantees a certain amount of funding for rural public and intercity transportation systems. Federal monies are distributed to federal, state, and local agencies to distribute to various projects. A review of SAFETEA-LU's impact on rural transportation found that funding for rural transportation systems has increased, but with only a few years of implementation to date, measuring any definitive impacts is difficult (KFH Group Inc., 2009).

Website: <http://www.fhwa.dot.gov/safetealu>

#### **Active Transportation Initiatives**

Active transportation has the combined benefit of being a mode of transportation and also promoting public health. Modes of active transportation can include walking, running, cycling, and rollerblading. However, many rural communities do not have the necessary infrastructure to promote active transportation. The rural focus on cars means that roads and highways are not equipped with space for walkers or cyclists and the long distances between destinations may mean that active transportation is just not feasible (Shikaze, n.d.). However, some communities have taken innovative approaches to land use and community development, such as in Haliburton County, described below.

Haliburton Highlands Cycling Coalition  
Haliburton County, Ontario, Canada

Formed in 2005, the Haliburton Highlands Cycling Coalition brings together cyclists in the area who are concerned with promoting safe and enjoyable cycling. The coalition has been key in advocating for infrastructure improvements in Haliburton County to make walking and cycling in the area safer. They have also been involved in public education campaigns in an effort to change attitudes with the “Park the car and get moving” and “Share the road” campaigns. The coalition found that community partnerships were imperative to enact change and also highlight the important role of public health partners.

Website: <http://www.cyclehaliburton.ca>

## **Where to go from here**

### **Assessment Tools**

Several organizations have developed toolkits and guides for communities who are looking to implement innovative transportation systems in rural communities. The Transit Research Board developed a *Guidebook for Change and Innovation at Rural and Small Urban Transit Systems* that offers a number of examples of innovative transportation initiatives launched in the United States in terms of productivity, efficiency, quality, funding, training, and marketing. This guidebook encourages rural transportation systems to embrace change because of the dynamic nature of rural communities. Innovation, in their view, is change for a useful purpose that will improve some aspect of the provision of transportation service (KFH Group Inc. & A-M-M-A, 2001).

The Institute for Transportation Research and Education (ITRE) at North Carolina State University developed a guide on advanced rural transportation systems that identifies a framework for communities to conduct a cost-benefit analysis. This framework demonstrates the utility of coordinated agreements between multiple partners, including governments, social service providers, and private companies. The framework includes a process of identifying:

- Transit markers (i.e., the expected customer base for the service);
- Geographic and economic characteristics of the community to be served;
- Types of transportation services already available; and,

- Needs of the community (e.g., increased service for riders, increased ridership, enhanced safety, improved scheduling, improved staff operations, better system management) (ITRE, 2001).

This report also includes a list of a number of technologies that transportation systems can implement to improve the efficiency of their service, as well as an evaluation tool (ITRE, 2001). Another type of economic analysis involves a five step process measuring:

- Employment and business activity;
- Increased mobility;
- Transportation cost impacts for riders;
- Impacts on overall travel expenditure patterns; and,
- Economic growth in the local community (Majkut, 2011).

Communities can also undertake a passenger demand assessment for rural public transportation (SG Associates, Inc., Leigh, Scott & Cleary, Inc., & C.M. Research, Inc., 1995). Passenger demand is defined as the number of one-way trips that will be taken when a given level of service is available. Assessing passenger demand for a transportation service involves:

- Determining the number of people who would potentially be served;
- Determining the size of the service area; and,
- Determining the amount of service (e.g., in square kilometres) that can be made available.

With these factors, a series of calculations can determine the passenger demand for the rural transportation service (see SG Associates, Inc., et al., 1995).

Specific communities have also undertaken comprehensive studies of the transportation needs of their populations. For example, Huron and Perth Counties in Ontario examined Statistics Canada data and conducted agency consultations and individual interviews to determine the demographics, existing transportation services available, and needs of their communities. This study found that, like in other communities, people living on a low income, including seniors, people with disabilities, youth, and women have difficulty accessing affordable rural transportation (Lynne Bowering Consulting, 2012). Also, the Transportation Work Group of Every Kid in our Communities (EKIOC) of Leeds and Grenville in Ontario conducted a pilot study to determine the transportation needs in their communities and develop a coordinated service. With funding from the Ontario Trillium Foundation, the working group hired paid drivers to transport residents for employment, medical, education, community service, recreation, and social purposes. The working group learned that sustainability

was the key factor in their rural transportation initiative and that provision of transportation was not always the best approach. For instance, many people in their communities had access to cars but no money for gas. In these cases, providing gas gift cards was more cost-effective. As such rural transportation initiatives should promote access, and not necessarily service provision, for rural transportation (EKIOC, 2011).

## **Conclusion**

This report overviews the demographic characteristics of rural communities in the Ottawa region and some of the transportation services that are currently available. Making the case that rural transportation is integral to the “liveability” of communities, this report highlights innovative approaches that have been undertaken across North America: affordable car ownership programs, rural public transportation systems, federal funding arrangements, and active transportation initiatives. With a number of assessment tools available, service providers and concerned citizens have a number of resources at their disposal to develop relevant and sustainable access to transportation in their own rural communities.

As argued above, access to transportation is particularly important for rural youth. Access to affordable transportation means rural youth can find jobs, do volunteer work, and participate in meaningful recreational activities. Without these opportunities, rural youth, especially those who are already at-risk, will not develop employability skills or a connection to their communities. These factors can have a significant impact on the future wellbeing of rural youth and the extent to which they engage in criminal or other antisocial behaviours. Providing access to rural transportation is thus an important component of an overall strategy to prevent crime and promote safety in Ottawa's communities.

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